

技术与应用

手性流动相添加法拆分酮康唑外消旋体

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摘要 采用C18反相色谱柱, 利用在流动相中加入手性选择剂的方法实现酮康唑对映体的拆分。研究了手性选择剂的种类及浓度、流动相pH值、甲醇比例和柱温等因素对酮康唑手性分离的影响, 结果表明磺丁基- β -环糊精可以使酮康唑对映体完全分离, 最后选择的流动相组成为甲醇-0.02 mol/L磷酸二氢钠(体积比为60:40, 含0.02%三乙胺和1.0 mmol/L磺丁基- β -环糊精, 用稀磷酸调节pH值到3.00)。酮康唑对映体在6 min内得到基线分离, 分离度为2.05。方法简便, 分离效果好, 对酮康唑对映体的拆分具有应用价值。

关键词 [高效液相色谱法](#) [酮康唑对映体](#) [磺丁基- \$\beta\$ -环糊精](#) [手性流动相添加剂](#)

Separation of ketoconazole enantiomers using high performance liquid chromatography with chiral mobile phase additives

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Abstract

A simple and effective method for the separation of ketoconazole enantiomers was developed using the chiral mobile phase additive on a C18 reversed-phase column. Several β -cyclodextrins were investigated as chiral mobile phase additives separately. The results showed that ketoconazole enantiomers were well separated by only adding sulfobutyl ether- β -cyclodextrin (SBE- β -CD) into the mobile phase. Excellent enantioseparation was achieved with the mobile phase composed of methanol-0.02 mol/L NaH₂PO₄ (60:40, v/v, containing 1.0 mmol/L SBE- β -CD and 0.02% triethylamine, at pH 3.00 adjusted with phosphoric acid aqueous solution). The flow rate was 1.0 mL/min. The detection wavelength was set at 225 nm and the column temperature at 30 °C. Under the optimized conditions, the resolution of ketoconazole enantiomers was 2.05.

Key words [high performance liquid chromatography \(HPLC\)](#) [ketoconazole enantiomers](#) [sulfobutyl ether- \$\beta\$ -cyclodextrin](#) [chiral mobile phase additives](#)

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